DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-002220
Date Inspected: 17-Apr-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works, Ltd.

OSM Arrival Time: 830
OSM Departure Time: 1830
Location: Muroran, Japan

CWI Name: Rory O'Kane and Harumi Kohama

CWI Present:	☑ Yes	☐ No					
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower, Jacking and Deviation Saddles

Summary of Items Observed:

On this date OSM Quality Assurance Representative Daniel L. Reyes observed the casting of the cable saddles, welding of the structural steel components and inspection relative to this project. The following was observed:

Foundry Shop-QC Magnetic Particle Testing

At the start of the shift this QA inspector observed Nikko Inspection Service (NIS) NDT level II technician Mr. Harumi Kohama perform the Magnetic Particle Testing (MPT) on the unstamped side of the West Deviation Saddle Casting identified as W2E2. The testing was performed on areas that required additional grinding of linear indications found during the performance of the initial MPT of the following areas; Rib 1-L to 2-L, Rib 3-L to 4-L, Rib 5-L to 6-L and Rib 7-L to 8-L. This QA inspector observed that the technician Mr. Kohama noted indications at the above areas during the MPT which will require additional grinding and re-test. The testing was performed utilizing an AC Yoke and the continuous dry method as per Japan Steel Works, Ltd. (JSW) MPT Procedure identified as ASTM E709, Specification No. SJ-2878 Rev., 1 Page 13 of 23. The performance and evaluation of the MPT performed by Harumi Kohama appeared to comply with the contract documents. The testing will resume after the linear indications noted by Mr. Harumi have been removed by grinding. The above observations were performed by this QA inspector at random intervals.

Later in the shift this QA inspector observed on Rib 7-L that an area of approximately 20mm wide, 50m deep and 70mm long appeared to have been removed by grinding. At this time the QA inspector inquired of this condition of the Rib 7-L with JSW personnel Yoshihiro Itoh. Mr. Yoshihiro informed this QA inspector that he would look into this issue and would have the information regarding the issue at hand.

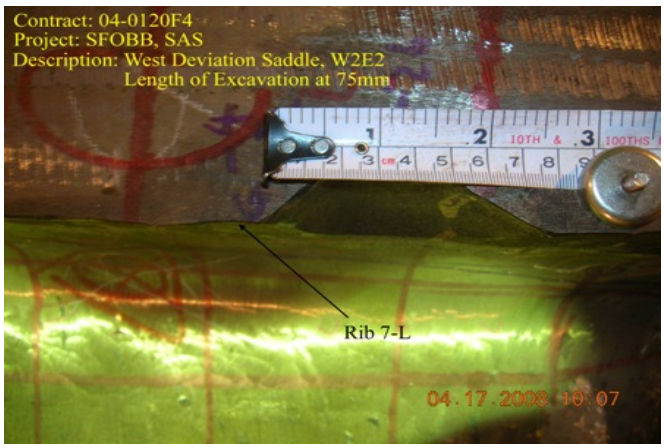
Procedure Qualification Test Plate-SW-7-1

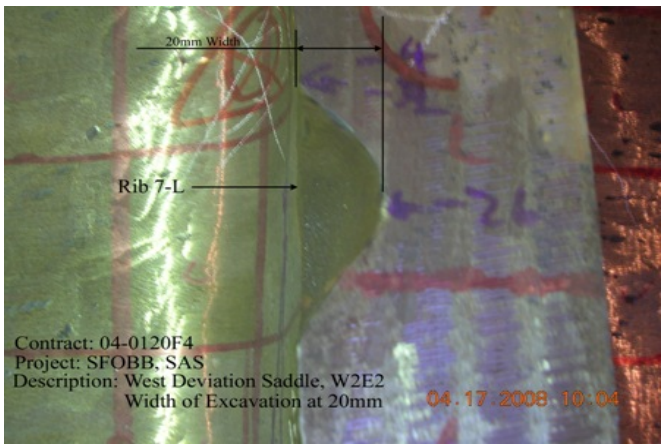
Later in the shift this QA inspector observed the continued welding and inspection of the Procedure Qualification Record (PQR) test plate identified as SW-7-1. The welding was performed by Japan Steel Works, Ltd. welding personnel Kouzou Kobayashi ID 08-5023 with the 50 millimeter thick test plate placed in the flat (1G) position. Mr. Kobayashi utilized the Shielded Metal Arc Welding (SMAW) as per the Welding Procedure Specification (WPS) SJ-2942 WP-10 which was also used by the Quality Control (QC) Inspector Rory O'Kane as a reference. The consumable utilized during the welding of the test plate was identified as a Hobart Electrode (Hoballoy) LB-52A with a diameter size of 5.0 millimeters which appears to comply with the AWS A5.1 specification and the E7016 classification.

The QC inspector Mr. O'Kane verified the minimum preheat temperature of 110 degrees Celsius and at the conclusion of verifying the surface temperature the welder Mr. Kouzou continued the welding of the fill passes. At this time this QA inspector observed the QC inspector verifying the amperage, voltage and travel speed. The average welding parameters were observed by this QA inspector was as follows; 245 amps, 25.0 volts with a travel speed measured at 157 mm/m.

Later in the shift this QA inspector observed, at random intervals, the QC inspector Rory O'Kane performing the in process weld inspection and verifying the minimum preheat and maximum interpass temperatures during the welding of the weld layers numbers 15 through 33. The welding of the Test Plate identified as SW-7-1 was not completed during this shift on this date and appeared to comply with the WPS.

The following digital photographs illustrate observations of the activities performed on this date.





Summary of Conversations:

There were general conversations with Japan Steel Works, Ltd. (JSW) Department Manager Planning and Administration Group (Casting Engineer) Casting Department Yoshihiro Itoh and Bridge Group Steel Products Department personnel Kunio Nagaya regarding the location of welding and inspection personnel.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials

for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Lanz,Joe	QA Reviewer